Purpose and Need
Flowing Springs Day Use Conversion and Erosion Mitigation
Payson Ranger District

Date: 12-1-2020

ID Team Leader: Kelly Mott Lacroix/Angela Abel

Project Name: Flowing Springs Day Use Conversion and Erosion Mitigation

Ranger District: Payson RD

Project type: Restoration and Rehabilitation of Vegetation

Target start date: February 1, 2021

Target finish date: October 31, 2022

Expected NEPA Documentation Type: Categorical Exclusion (DM required)
If Categorical Exclusion, select Category: 32.2 (20) Activities that restore, rehabilitate, or stabilize lands occupied by "Unauthorized Routes"

Project location: The Flowing Springs Day Use project is on the Payson Ranger District. The project is located at Flowing Springs Campground, near AZ 260, approximately 5 air miles northwest from Payson, AZ. The legal location of the project is Township 10E, Range 11N, Section 17.

Vegetation type:

Vegetation around the campground consists of cottonwood, conifers, and oak shrubs. Riparian vegetation exists throughout the riverbanks north of the campground. The ERU is Cottonwood Willow Riparian Forest.

Existing Condition

Flowing Springs is a dispersed campground site. The increased popularity of the campground, and the lack of resources to maintain the area have resulted in significant denuding of the area from social trails, trash throughout the campground and the surrounding area, and rills and gullies throughout the campground that reach toward the East Verde River. A previous attempt at erosion control using wire gabions exacerbated conditions and these gabions are now a safety hazard for visitors.

Desired Conditions

The Payson RD would like to convert the area to day use, arrest erosion on the site, restore form and function to the denuded area, and create a single trail for visitors to use to access the East Verde River.

Current Management Direction

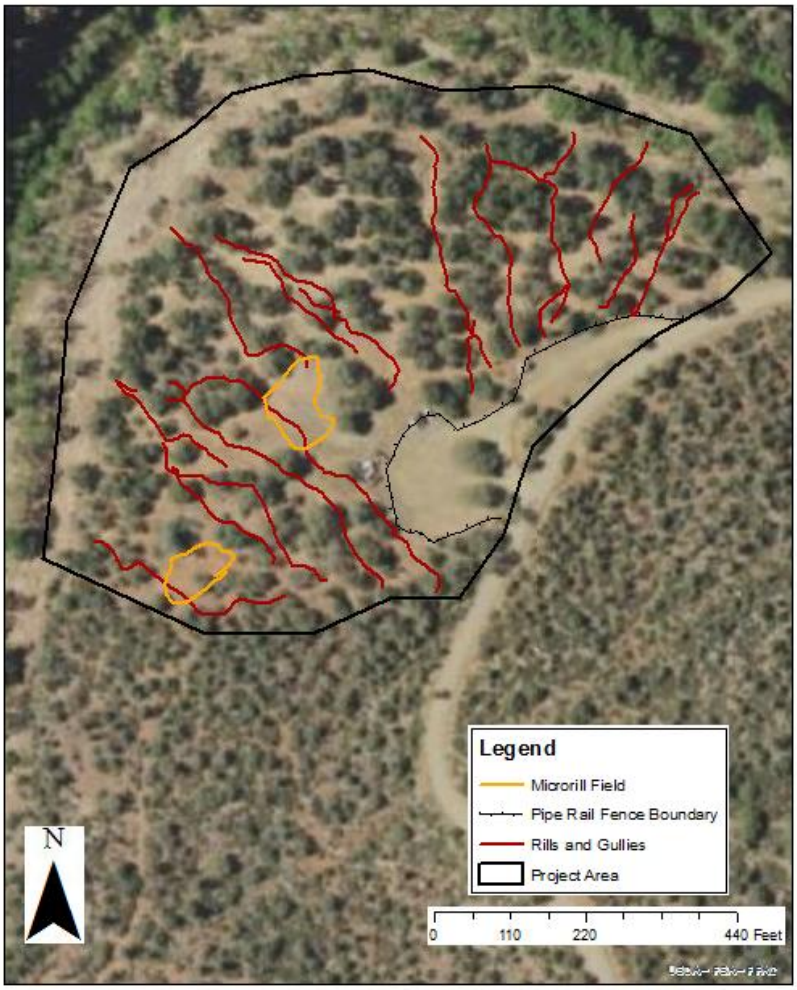
Management area 4D management direction is to "Manage for a variety of renewable resource outputs with primary emphasis on intensive, sustained yield timber management, timber resource

protection, creation of wildlife habitat diversity, increased populations of emphasis harvest species, and recreation opportunities."

Purpose and Need

The purpose of this project is to facilitate natural recovery of the 13-acre area through eliminating camping on the site, restoring vegetation, arresting erosion, and providing a single access trail to the river. Turbidity and sediment threaten the East Verde River watershed and beyond, increasing Escherichia coli, altering fish habitat, and ultimately diminishing reservoir capacity at Horseshoe Reservoir on the Verde River. The site is adjacent to the East Verde River, making erosion from the site of particular concern, increasing the need to both reduce pressure on the area through eliminating camping and repairing the damage done by dozens of social trails and years of use. Initial field work at the site identified over 5,500 feet of rills and gullies and two smaller areas where the rills were too numerous to document. (See figure below) In addition, there are at least 20 existing wire basket gabions onsite that are increasing erosion and causing a safety hazard.

Flowing Springs Restoration Project



Proposed Action

This project will occur in two phases:

Phase 1:

1. Close area to overnight camping and convert the area to day use only.
2. Install a sign describing closure and why it was necessary.
3. Install 800 feet of pipe rail will along the parking area to restrict access. This boundary is already disturbed and marked with large boulders. Pipe rail will be installed by a crew supervised by our partner Friends of the Verde.

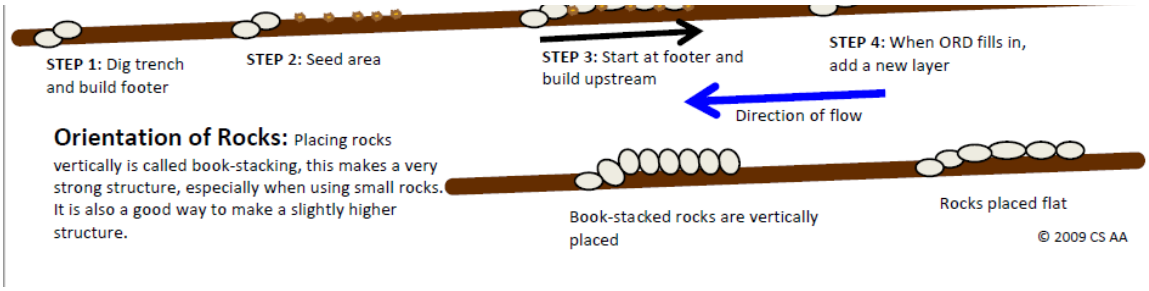
Phase 2:

1. Remove existing rock-filled gabions on the site. Rebar posts will be cut to ground level, wire baskets will be removed from the site, and rock within the gabions will be reused in the new structures.
2. Repair approximately 11 acres of disturbed area with rills and gullies. Damaged soils can take a very long time to heal; therefore, one of the first actions in gully restoration is erosion control is to slow the water using one-rock structures, media lunas, and rock mulch rundowns. These structures will be constructed by a combination of crews managed by our partner, Friends of the Verde, and volunteer days.
3. Scarify and seed the project area. The area will be scarified to loosen compacted soils and seeding using native seed from the Tonto NF stock, or other seed as approved by the Forest Botanist.
4. Construct a trail from the parking lot to the river to provide access. The trail will avoid heritage resources on the western side of the site.
5. Replace sign installed in phase one with an interpretive sign describing the work and why it was necessary. Install 2-5 Picnic Tables and Ramadas in cleared, selected sites.

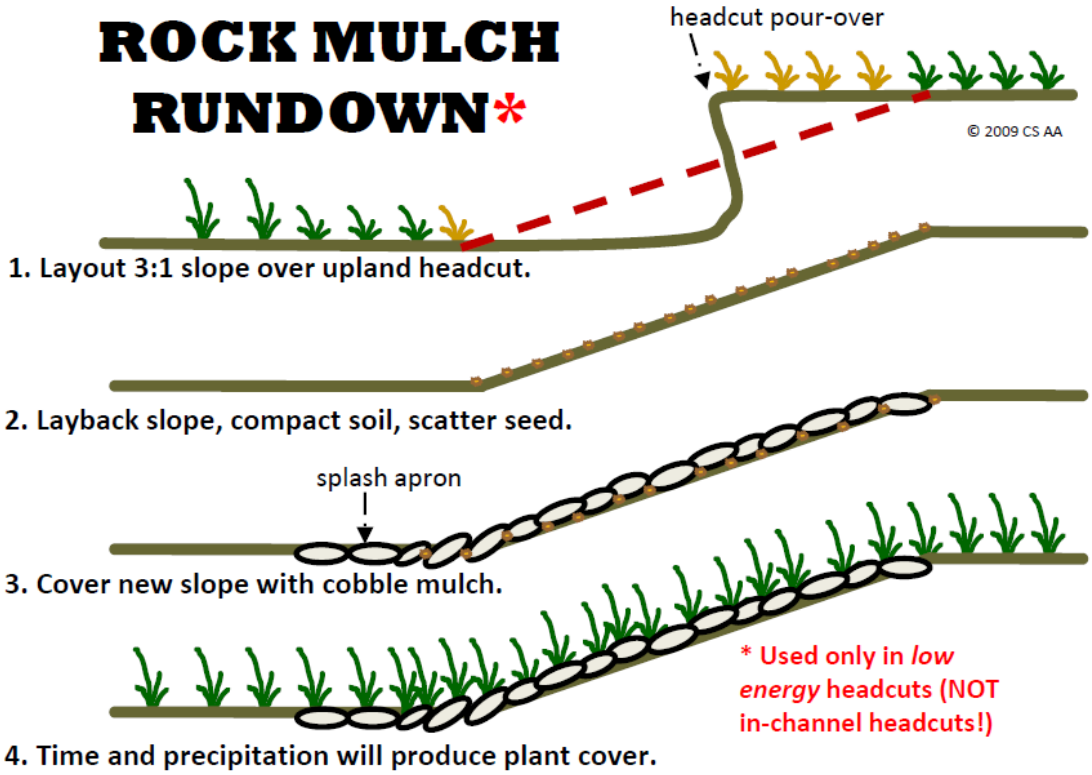
Design Features

Erosion control features will include one rock structures, media lunas, and rock mulch rundowns. (See figures below). The purpose of all these structures is to slow the flow of water and slowly capture sediment from flowing further downslope. Many of the gullies on the site are greater than 3 feet deep, which will likely require multiple "installations" of the one rock structures over the course of the next few years (depending on the amount of rainfall received) to slowly fill in the gully. Installation of the erosion control features will be by hand using rock from the existing gabions and other local sources if needed. Seeding will be using native seed from the Tonto NF stock, or other seed as approved by the Forest Botanist. If possible, seeding will occur proximate to winter/spring storm events to maximize the success of the effort. Trail construction will be according to current FS standards.

One Rock Structure Design



ROCK MULCH RUNDOWN*

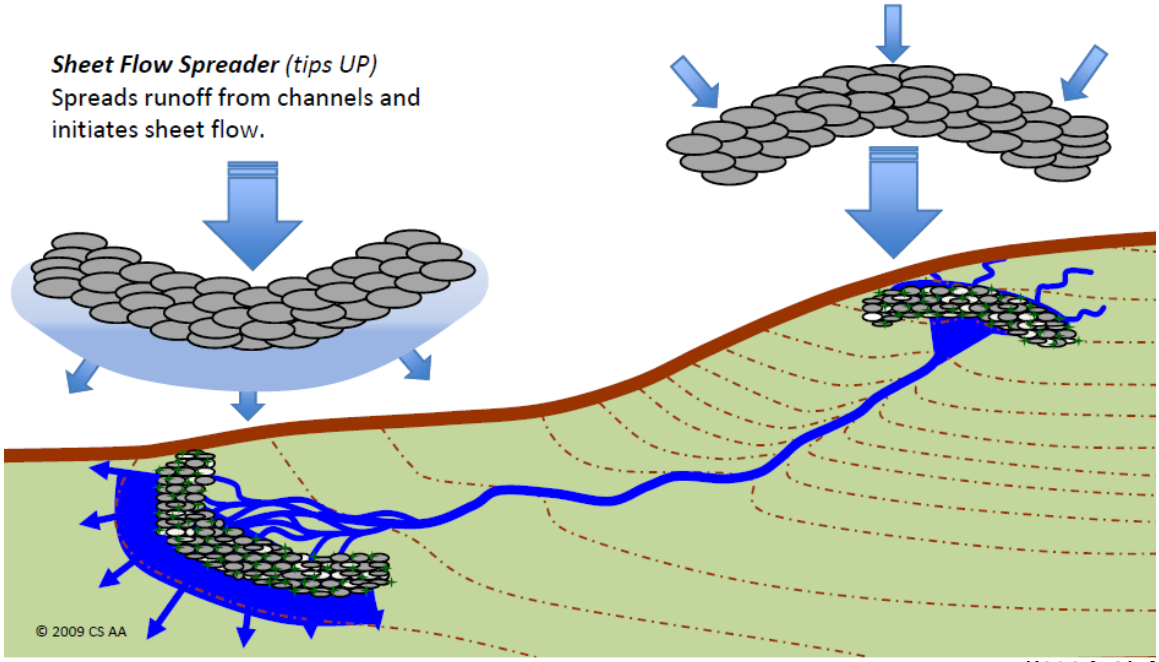


* Used only in *low energy* headcuts (NOT in-channel headcuts!)

MEDIA LUNA

Sheet Flow Collector *(tips DOWN)*
Prevents developing rills and gullies from eroding upslope.

Sheet Flow Spreader *(tips UP)*
Spreads runoff from channels and initiates sheet flow.



Implementation Timeline:

The desired start date for phase 1 is February 2021. Phase 2 will occur in the fall of 2021 and continue in phases over the next 2-3 years.

Please send your questions, concerns, or mitigations to:

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